Via EFS Web: April 22, 2010

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: John S. Babcook et al.	Docket No. ABX-226-US-NP
Patent No.: 7,285,269	Group Art Unit No.: 1644
Issued: October 23, 2007	Examiner: Zachary Skelding and Phillip Gambel

For: ANTIBODIES DIRECTED TO TUMOR NECROSIS FACTOR

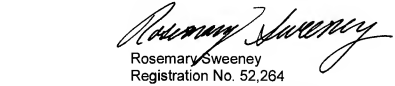
CERTIFICATE OF CORRECTION UNDER 37 CFR §§ 1.322 AND 1.323

ATTN: Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Enclosed is a Certificate of Correction on an appropriate form. Applicants believe that it corrects errors by both the Office and by Applicants. Applicants do not believe that these corrections add any new matter to the patent. A number of sequences are added to the sequence listing. These sequences were part of the sequence listing submitted on November 28, 2006. The sequences themselves were disclosed in the application-as-filed, although they were not originally part of the sequence listing. Hence, Applicants do not believe that the added sequences constitute new matter. The Office is hereby authorized to charge the fee of $100 to Deposit Account No. 01-0519 for this Certificate of Correction. If further fees are due, the examiner is hereby authorized to charge such fees to the same deposit account.

Sincerely,



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Date: April 22, 2010

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CERTIFICATE OF EFS-Web TRANSMISSION

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being transmitted electronically through EFS-Web to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313, on the date indicated below:

/Kathleen F. Prindle/	April 22,2010
Kathleen F. Prindle	Date

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,285,269
APPLICATION NO. : 10/727,155
ISSUE DATE : October 23, 2007
INVENTOR(S) : Babcook et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On page 1 (title page), under "Foreign Patent Documents, please insert --EP 0 614 984 A, 09-14-1994, Miles Inc.

On page 3 (title page), under "non Patent Literature Documents" please insert:

--Baselga et al. *Journal of clinical Oncology*. 18(4):904-914 (2000).

Glennie et al. *Immunology Today*. 21(8):403-410 (2000).

Kempeni. *Annals of the Rheumatic Diseases*. 58(3):170-172 (1999).

Kempeni. *Annals of the Rheumatic Diseases*. 59(Supp. 1):144-145 (2000).

Mukhtyar et al. *Journal of Forensic Sciences*. 64(Supp. 4):31-36 (2005).

Taylor. *Current Opinion in Rheumatology*. 13(3):164-169 (2001).--.

On page 3, Col. 1, 14th line under the heading "Other Publications", please delete "Characterizaion" and insert --Characterization--, therefor.

On page 3, Col. 1, 25th line under the heading "Other Publications", please delete "Appliation" and insert --Application--, therefor.

On page 3, Col. 1, 31st line under the heading "Other Publications", please delete "Immuniation" and insert --Immunization--, therefor.

On page 3, Col. 1, 46th line under the heading "Other Publications", please delete "Pseudomanas" and insert --Pseudomonas--, therefor.

On page 3, Col. 2 (Other Publications), line 9, please delete "Sciencesl" and insert --Sciences--, therefor.

On page 3, Col. 2 (Other Publications), line 12, please delete "Lipopolysacchardie" and insert --Lipopolysaccharide--, therefor.

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PATENT NO. : 7,285,269
APPLICATION NO. : 10/727,155
ISSUE DATE : October 23, 2007
INVENTOR(S) : Babcook et al.

On page 3, Col. 2 (Other Publications), line 18, please delete "LPS-induced" and insert --LPS-Induced--, therefor.

On page 3, Col. 2 (Other Publications), line 44, please delete "libraries," and insert --libraries."--, therefor.

On page 3, Col. 2 (Other Publications), line 65, please delete "7(3)251" and insert --7(3):251--, therefor.

In Col. 2, line 41, before "SEQ" please insert -- (--.

In Col. 2, line 44, please delete "lie" and insert --Ile--, therefor.

In Col. 2, line 55, please delete "(CDR 1)" and insert --(CDR1)--, therefor.

In Col. 3, line 14, please delete "lie" and insert --Ile--, therefor.

In Col. 3, line 45, please delete "of"Val" and insert --of "Val --, therefor.

In Col. 3, line 54, please delete "Gin" and insert --Gln--, therefor.

In Col. 3, line 59, please delete "of"Gln" and insert –of "Gln --, therefor.

In Col. 4, line 3, please delete "of"Gly" and insert --of "Gly --, therefor.

In Col. 4, line 14, please delete "of"Gly" and insert --of "Gly --, therefor.

In Col. 7, line 19, please delete "cell'" and insert --cells--, therefor.

In Col. 18, line 21, please delete "understood." and insert ---understood --, therefor.

In Col. 20, line 11, please delete "J" and insert --J. --, therefor.

In Col. 26, line 66, please delete "FRI" and insert –FR1,--, therefor.

In Col. 31, line 3, please delete "described,the" and insert --described the--, therefor.

In Col. 35, line 2, please delete "(EDC.," and insert --(EDC, --, therefor.

In Col. 40, line 5, please delete "HA½" and insert --½ HA--, therefor.

In Col. 40, line 12, please delete $NaHCO_{38.4}$" and insert --$NaHCO_3$ 8.4--, therefor.

In Col. 42, line 12, please delete "Isoptype" and insert --Isotype--, therefor.

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In Col. 43, line 34, please delete "0.0" and insert --0.01--, therefor.

In Col. 43, line 45, please delete "5μL" and insert --50μL--, therefor.

In Col. 44, lines 44-45, please delete "Neutralization of - - - - Assay" and insert the same on Line 45 as a Heading of the next paragraph.

In Col. 45, line 15, please delete "poptosis" and insert --Apoptosis--, therefor.

In Col. 60, line 16, please delete "Structual Analysi" and insert --Structural Analysis--, therefor.

In Cols. 59-64 (Table 31), please delete all of Table 31 and insert the attached Table 31 therefor.

In Cols. 63-66 (Table 32), please delete all of Table 32 and insert the attached Table 32 therefor.

In Cols. 65-74 (Table 33), please delete all of Table 33 and insert the attached Table 33 therefor.

In Cols. 73-82 (Table 34), please delete all of Table 34 and insert the attached Table 34 therefor.

In Col. 81, line 28, please delete "Detemination" and insert --Determination--, therefor.

In Col. 81, line 46, please delete "immunoglobuins" and insert --immunoglobulins--, therefor.

In Col. 301, please insert:

```
--<210> 321
<211> 5
<212> PRT
<213> Homo sapiens

<400> 321
Ser Tyr Asp Met His
 1               5


<210> 322
<211> 17
<212> PRT
<213> Homo sapiens

<400> 322
Val Ile Trp Ser Asp Gly Ser Ile Lys Tyr Tyr Ala Asp Ser Val Lys
```

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```
 1               5                   10                  15
Gly



<210> 323
<211> 16
<212> PRT
<213> Homo sapiens

<400> 323
Glu Val Glu Ser Ala Met Gly Gly Phe Tyr Tyr Asn Gly Met Asp Val
 1               5                   10                  15


<210> 324
<211> 11
<212> PRT
<213> Homo sapiens

<400> 324
Arg Ala Ser Gln Gly Ile Arg Ile Asp Leu Gly
 1               5                   10


<210> 325
<211> 7
<212> PRT
<213> Homo sapiens

<400> 325
Ala Ala Ser Thr Leu Gln Ser
 1               5


<210> 326
<211> 9
<212> PRT
```

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<213> Homo sapiens

<400> 326
Leu Gln His Lys Ser Tyr Pro Leu Thr
1 5

<210> 327
<211> 5
<212> PRT
<213> Homo sapiens

<400> 327
Arg Asn Tyr Met Ser
1 5

<210> 328
<211> 16
<212> PRT
<213> Homo sapiens

<400> 328
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1 5 10 15

<210> 329
<211> 7
<212> PRT
<213> Homo sapiens

<400> 329
Gly Glu Gly Gly Phe Asp Tyr
1 5

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<210> 330
<211> 11
<212> PRT
<213> Homo sapiens

<400> 330
Arg Ala Ser Gln Ser Val Ser Ser Asn Leu Ala
1 5 10

<210> 331
<211> 7
<212> PRT
<213> Homo sapiens

<400> 331
Gly Ala Ser Ile Arg Ala Thr
1 5

<210> 332
<211> 8
<212> PRT
<213> Homo sapiens

<400> 332
Gln Gln Tyr Asn Tyr Trp Trp Thr
1 5 --.

In Col. 301, line 35, Claim 2, please delete "antibody;" and insert --antibody--, therefor.

In Col. 301, line 36, Claim 2, after "claim 1" insert -- , --.

In Col. 301, line 39, Claim 3, after "claim 1" insert -- , --.

In Col. 301, line 53, Claim 8, please delete "bindivg" and insert --binding--, therefor.

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PATENT NO. : 7,285,269
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ISSUE DATE : October 23, 2007
INVENTOR(S) : Babcook et al.

In Col. 301, line 54, Claim 8, after "thereof", please insert -- , --.

In Col. 301, line 54, Claim 8, please delete "light" and insert ---heavy---, therefor.

In Col. 301, line 55, Claim 8, please delete "heavy" and insert ---light---, therefor.

In Col. 302, line 29, Claim 13, please delete "light" and insert ---heavy---, therefor.

In Col. 302, line 30, Claim 13, please delete "heavy" and insert ---light---, therefor.

In Col. 302, line 32, Claim 13, please delete "wherein," and insert --wherein--, therefor.

In Col. 302, line 42, Claim 17, please delete "radioistope" and insert --radioisotope-- , therefor.

In Col. 302, line 66, Claim 25, after "claim 13" please insert -- , --.

In Col. 303, line 13, Claim 26, after "(CDR3)" please insert --comprising--.

In Col. 303, line 18, Claim 26, please delete "Len" and insert --Leu--, therefor.

In Col. 303, line 24, Claim 26, after "(CDR3)" please insert --comprising--.

In Col. 303, line 24, Claim 26, please delete "Gin" and insert --Gln--, therefor.

In Col. 303, line 26, Claim 27, after "thereof", please insert -- , --.

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Table 31. XENOMAX® Heavy Chain Analysis

SEQ ID NO:	Single Cell	V Heavy/D/J	FR1	CDR1	FR2
267	-	**Germline**	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYGMH	WVRQAPGKGLEWVA
74	299 v. 2	VH3-33/D5-5/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYDMH	WVRQAPGKGLEWVA
70	299 v. 1	VH3-33/D5-5/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYDMH	WVRQAPGKGLEWVA
38	148	VH3-33/D5-5/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	NYDMH	WVRQAPGKGLEWVA
78	313	VH3-33/D5-24/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	NHDIH	WVRQAPGKGLEWVA
6	15	VH3-33/D6-6/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYDIH	WVRQAPGKGLEWVA
22	95	VH3-33/D6-19/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	NYDMH	WVRQAPGKGLEWVA
268	-	**Germline**	EVQLVESGGGLIQPGGSLRLSCAASGFTVS	SNYMS	WVRQAPGKGLEWVS
46	250	VH3-53/D3-16/JH4b	EVQLVESGGGLIQPGGSLRLSCAASGFTVS	SNYMS	WVRQAPGKGLEWVS
50	263	VH3-53/D3-16/JH4b	EVQLVESGGGLIQPGGSLRLSCAASGFTVS	RNYMS	WVRQAPGKGLEWVS
54	269	VH3-53/D3-16/JH4b	EVQLVESGGGLIQPGGSLRLSCAASEFTVS	RNYMS	WVRQAPGKGLEWVS
269	-	**Germline**	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYGMH	WVRQAPGKGLEWVA
58	280	VH3-33/D4-17/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTVS	SYGMH	WVRQAPGKGLEWVA
62	282	VH3-33/D4-17/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTVS	SYGMH	WVRQAPGKGLEWVA
66	291	VH3-33/D1-26/JH6b	QVQLVESGGSVVQPGRSLRLSCAASGFTFS	NYGIH	WVRQAPGKGLEWVA
270	-	**Germline**	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYGMH	WVRQAPGKGLEWVA
42	234	VH3-30/D1-26/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYDMH	WVRQAPGKGLEWVA
34	140	VH3-30/D1-20/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SYGMH	WVRQAPGKGLEWVA
14	28	VH3-30/D3-3/JH6b	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	NYGMH	WVRQAPGKGLEWVT
271	-	**Germline**	QVQLQESGPGLVKPSETLSLTCTVSGGSIS	SYYWS	WIRQPAGKGLEWIG
18	69	VH4-4/D2-2/JH2	QVQLQESGPGLVKPSETLSLTCTVSGGSIN	HYYWS	WIRQPAGKGLEWIG
272	-	**Germline**	QVQLQESGPGLVKPSQTLSLTCTVSGGSIS	SGGYYWS	WIRQHPGKGLEWIG
2	2	VH4-31/D1-20/JH6b	QVQLQESGPGLVKPSQTLSLTCTVSGGSIS	SGGYYWS	WIRQHPGKGLEWIG
10	25	VH4-31/D1-20/JH6b	QVQLQESGPGLVKPSQTLSLTCTVSGGSIS	SGGYYWS	WIRQHPGKGLEWIG
30	131	VH4-31/D1-20/JH6b	QVQLQESGPGLVKPSQTLSLTCTVSGGSIS	SGGYYWS	WIRQHPGKGLEWIG
26	123	VH4-31/D1-20/JH6b	QVQLQESGPGLVKPSQTLSLTCTVSGGSIS	SGGYYWS	WIRQHPGKGLEWIG

SEQ ID NO:	Single Cell	CDR2	FR3	CDR3	FR4
267	-	VIWYDGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR		WGQGTTVTVSS
74	299 v. 2	VIWSDGSIKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	EVESAMGGFYYNGMDV	WGQGTTVTVSS
70	299 v. 1	VIWSDGSIKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	EVESAMGGFYYNGMDV	WGQGATVTVSS
38	148	VIWYDGSIKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYFCAR	ETAILRGYYYYDMDV	WGQGTTVTVSS
78	313	VIWSDGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	EKMATIKGYYYYGMDV	WGQGTTVTVSS
6	15	VIWYDGSIKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	EEQLVRGGYYYYGMDV	WGQGTTVTVSS
22	95	VIWYDGSIKYYADSVKG	RFTISRDNSKNTLHLQMNSLRAEDTAVYYCAR	EIAVAGGYYYGLDV	WGQGTTVTVSS
268	-	VIYSGGSTYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR		WGQGTLVTVSS
46	250	VIYSGDRTYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	GEGGFDY	WGQGTLVTVSS
50	263	VIYSGDRTYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	GEGGFDY	WGQGTLVTVSS
54	269	VIYSGDRTYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	GEGGFDY	WGQGTLVTVSS
269	-	VIWYDGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR		WGQGTTVTVSS
58	280	VIWSNGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	DNGVYVGYAYYYGMDV	WGQGTTVTVSS
62	282	VIWSNGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	DNGVYVGYAYYYGMDV	WGQGTTVTVSS
66	291	VIWSDGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	ELPNSGSYSGYYYYYGMDV	WGQGTTVTVSS
270	-	VISYDGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR		WGQGTTVTVSS
42	234	VISYDGSIKYYADSVKG	RFTISRDNSKNTLYLQVNSLRAEDTAVYYCAR	EVRSGSYYYYYSMDV	WGQGTTVTVSS
34	140	VISYDGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	DQDNWNYYYGMDV	WGQGTTVTVSS
14	28	IISYDGSNKYYADSVKG	RFTISRDNSKNTLYLQMNSLRAEDTAVYYCVT	YYDFWSGYLPGMDV	WGQGTTVTVSS
271	-	RIYTSGSTNYNPSLKS	RVTMSVDTSKNQFSLKLSSVTAADTAVYYCAR		WGRGTLVTVSS
18	69	RIYPTGSTNYNPSLKS	RVTMSVDTSKNQFSLKLSSVTAADTAVYYCAG	GWSYWYFDL	WGRGTLVTVSS
272	-	YIYYSGSTYYNPSLKS	RVTISVDTSKNQFSLKLSSVTAADTAVYYCAR		WGQGTTVTVSS
2	2	NIYYSGSTYYNPSLKS	RVTISVDTSKNQFSLKLSSVTAADTAVYYCAR	DSNQYNWNDEVYDYGLDV	WGQGTTVTVSS
10	25	NIYYSGSTYYNPSLKS	RVTISVDTSKNQFSLKLSSVTAADTAVYYCAR	DSNQYNWNDEVYDYGLDV	WGQGTTVTVSS
30	131	NIYYSGSTYYNPSLKS	RVTISVDTSKNQFSLKLSSVTAADTAVYYCAR	DSNQYNWNDEVYDYGLDV	WGQGTTVTVSS
26	123	NIYYSGSTYYTPSLKS	RVTISVDTSKNQFSLKLSSVTAADTAVYYCAR	DSNQYNWNDEVYDYGLDV	WGQGTTVTVSS

Table 32. XENOMAX® Light Chain Analysis

SEQ ID NO:	Single Cell	V Kappa/J	FR1	CDR1	FR2
273	-	**Germline**	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
72	299	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQGIRIDLG	WYQQKPGKAPKRLIY
80	313	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
68	291	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
44	234	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQDIRNDLG	WYQQKPGKAPKRLIY
4	2	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
12	25	A30VK1/JK4	DIQMTQSPSSLSASVRDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
32	131	A30VK1/JK4	DIQMTQSPSALSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
8	15	A30VK1/JK4	DIQMTQSPSSLSASIGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
24	95	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
40	148	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIS
28	123	A30VK1/JK4	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
274	-	**Germline**	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
60	280	A30VK1/JK1	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
64	282	A30VK1/JK1	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLG	WYQQKPGKAPKRLIY
16	28	A30VK1/JK1	DIQMTQSPSSLSASVGDRVTITC	RASQGIRNDLT	WYQQKPGKAPKRLIY
275	-	**Germline**	DVVMTQSPLSLPVTLGQPASISC	RSSQSLVYSDGNTYLN	WFQQRPGQSPRRLIY
20	70	A1VK2/JK4	DVVMTQSPLSLPVTLGQPASISC	RSSQSLVYSDGSTYLN	WFQQRPGQSPRRLIY
276	-	**Germline**	DIVMTQSPLSLPVTPGEPASISC	RSSQSLLHSNGYNYLD	WYLQKPGQSPQLLIY
36	145	A19VK2/JK1	DIVMTQSPLSLPVTPGEPASISC	RSSQSLLHSNGYNYLD	WYLQKPGQSPQLLIF
277	-	**Germline**	EIVMTQSPATLSVSPGERATLSC	RASQSVSSNLA	WYQQKPGQAPRLLIY
48	250	L2VK3/JK1	EIVMTQSPATLSVSPGERATLSC	RASQSVTSNLA	WYQQKPGQAPRLLIH
52	263	L2VK3/JK1	EIVMTQSPATLSVSPGERATLSC	RASQSVSSNLA	WYQQKPGQAPRLLIH
56	269	L2VK3/JK1	EIVMTQSPATLSVSPGERATLSC	RASQSVSSNLA	WYQQKPGQAPRLLIH

SEQ ID NO:	Single Cell	CDR2	FR3	CDR3	FR4
273	-	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
72	299	AASTLQS	GVPSRFSGSGSGTEFIFTISSLQPEDFASYYC	LQHKSYPLT	FGGGTKVEIK
80	313	AASSLES	GVPSRFSGSGSGPEFTLTISSLQPEDFATYYC	LQHNSYPLT	FGGGTKVEIQ
68	291	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHCCYPLT	FGGGTKVEIK
44	234	AASSLQS	GVPSRFSGSGSGPEFTLTISSLQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
4	2	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNNYPLT	FGGGTKVEIK
12	25	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
32	131	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHKSYPLT	FGGGTKVEIK
8	15	AASSLQS	GVPSRFSGSGSGPEFTLTISSLQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
24	95	AASSLQS	GVPSRFSGSGSGTEFTLTVSSLQPEDFATYYC	LQHHSYPLT	FGGGTKVQIN
40	148	AASSLQG	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
28	123	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNNYPLT	FGGGTKVEIK
274	-	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNSYPWT	FGQGTKVEIK
60	280	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNSYPRT	FGQGTKVEIK
64	282	AASSLHS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNSYPWT	FGQGTKVEIK
16	28	AASSLQS	GVPSRFSGSGSGTEFTLTISSLQPEDFATYYC	LQHNSFPWT	FGQGTKVEIK
275	-	KVWNWDS	GVPDRFSGSGSGTDFTLKISRVEAEDVGVYYC	MQGTHWP##LT	FGGGTKVEIK
20	70	KVWNWDS	GVPDRFSGSGSGTDFTLKISRVEAEDVGVYYC	MQGSHWPREFT	FGGGTKVEIK
276	-	LGSNRAS	GVPDRFSGSGSGTDFTLKISRVEAEDVGVYYC	MQALQIWT	FGQGTKVEIK
36	145	LGSYRAS	GVPDRFSGSGSGTDFTLKISRVEAEDVGVYYC	MQALQIWT	FGQGTKVEIK
277	-	GASTRAT	GIPARFSGSGSGTEFTLTISSLQSEDFAVYYC	QQYNNWWT	FGQGTKVEIK
48	250	GASIRAT	GLPARFSGSGSGTEFTLTISSLQSEDFAVYYC	QQYNYWWT	FGQGTKVEIK
52	263	GASIRAT	GLPARFSGSGSGTEFTLTISSLQSEDFAVYYC	QQYNYWWT	FGQGTKVEIK
56	269	GASIRAT	GLPARFSGSGSGTEFTLTISSLQSEDFAVYYC	QQYNYWWT	FGQGTKVEIK

Table 32, 2

Table 33. Hybridoma Heavy Chain Analysis AB-TNFα-XG2

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
	278	**Germline**	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
2.14	132	VH3-33/D6-19/JH6b	QVQLVESGGGVVQPGRSLRLS CAAS	GLIFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ERDSSGWYYYG MDV	WGQGTTVTVSS
2.13	128	"	QVQLVESGGGVVQPGRSLRLS CAAS	GLIFSNYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	EGIAVAGPFYY YYGMDV	WGQGTTVTVSS
2.10	124	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSIKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ERDSSGWYYYG MDV	WGQGTTVTVSS
	279	**Germline**	EVQLLESGGGLVQPGGSLRLS CAAS	GFTFSSYAMS	WVRQAPGKGLE WVS	AISGSGGSTYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAK		WGQGTLVTVSS
4.23	262	VH3-23/D3-22/JH4b	EVQLLESGGGLVQPGGSLRLS CAAS	GFTFSSYAMS	WVRQAPGKGLE WVS	AISGSGGSTYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAK	DYYDSSGYHPF DY	WGQGTLVTVSS
	280	**Germline**	EVQLVESGGGLVKPGGSLRLS CAAS	GFTFSSYSMN	WVRQAPGKGLE WVS	SISSSSSYIYY ADSVKG	RFTISRDNAKNSLYLQMNSLR AEDTAVYYCA#		WGQGTTVTVSS
2.21	158	VH3-21/D1-20/JH6b	EVQLVESGGGLVKPGGSLRLS CAAS	GFTFSSYSMN	WVRQAPGKGLE WVS	SISSSSSYIYY ADSVKG	RFTISRDNAKNSLYLQMNSLR AEDTAVYYCAR	GGITGTTNYYG MDV	WGQGTTVTVSS
	281	**Germline**	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTLVTVSS
4.7	198	VH3-33/D6-19/JH4b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	IIWYDGSNEYY GDSVKG	RFTISRDNSKNTLFLQMNSLR AEDTAVYYCAR	DPLRIVVAGDF DY	WGQGTLVTVSS
4.11	214	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	IIWYDGSNEYY GDSVKG	RFTISRDNSKNTLFLQMNSLR AEDTAVYYCAR	DPLRIVVAGDF DY	WGQGTLVTVSS
	282	**Germline**	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGSTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTMVTVSS
3.9	186	VH3-53/--/JH3b	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGSTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	GPGAFDI	WGQGTMVTVSS
3.8	182	"	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSNNYMH	WVRQAPGKGLE WVS	VIYSGGNTYYA DSVKG	RFTISRDNSKNTLFLQMNSLK TEDTAVYYCAR	GPGAFDI	WGQGTMVTVSS
	283	**Germline**	EVQLVQSGAEVKKPGESLKIS CKGS	GYSFTSYWIG	WVRQMPGKGLE WMG	IIYPGDSDTRY SPSFQG	QVTISADKSITTAYLQWSSLK ASDTAMYYCAR		WGQGTTVTVSS
2.4	100	VH5-51/D3-3/JH6b	EVQLVQSGAEVKKPGESLKIS CKGS	GYSFTSDWIG	WVRQMPGKGLE WMG	IIYPGDSDTRY SPSFQG	QVTISADKSITTAYLQWSSLK ASDTAMYYCAR	SGYGMDV	WGQGTTVTVSS
	284	**Germline**	QVQLVQSGAEVKKPGASVKVS CKAS	GYTFTSYGIS	WVRQAPGQGLE WMG	WISAYNGNTNY AQKLQG	RVTMTTDTSTSTAYMELRSLR SDDTAVYYCAR		WGQGTLVTVSS
3.4	170	VH1-18/D6-19/JH4b	QVQLVQSGAEVKKPGASVKVS CKAS	GYTFTFYSIT	WVRQAPGQGLE WMG	WISAYNDNTNY AQKLQG	RVTMTTDTSTSTAYMELRSLR SDDTAVYYCAR	TFTSGFDY	WGQGTLVTVSS
	285	**Germline**	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTLVTVSS

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
2.3	96	VH3-33/D4-23/JH4b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMN	WVRQAPGKGLE WVA	VIWYDGSNKYY GDSVKG	RFTISRDNSKNTLYVQMNSLR AEDTAVYYCAR	ESDYGGNPYFD Y	WGQGTLVTVSS
4.8	202	"	QVHLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWHDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCTR	ESDYGGYPYFD Y	WGQGILATVSS
4.4	194	"	QVHLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWHDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCTR	ESDYGGYPYFD Y	WGQGILATVSS
4.3	190	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ESDYGGNPYFD Y	WGQGTLAAVSS
	286	Germline	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGSTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTLVTVSS
2.17	144	VH3-53/D7-27/JH4b	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYVN	WVRQAPGKGLE WVS	VIYNAGSAYYA DSVKG	RFTISRDNSKNTLFLQMNSLR AEDTAVYYCAR	GTGAFDY	WGQGTLVTVSS
	287	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VISYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
4.13	222	VH3-30/D4-17/JH6b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYDMH	WVRQAPGKGLE WVA	IISYDGSIKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ENAVTYGGYYH YGMDV	WGQGTTVTVSS
	288	Germline	QVQLVESGGGLVKPGGSLRLS CAAS	GFTFSDYYMS	WIRQAPGKGLE WVS	YISSSGSTIYY ADSVKG	RFTISRDNAKNSLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
1.1	84	VH3-11/--/JH6b	QVQLVESGGGLVKPGGSLRLS CAAS	GFTFSDYYMS	WIRQAPGKGLE WVS	YISRSGSTIYY ADSVKG	RFTISRDNAKNSLYLQMNSLR AEDTAVYYCAR	SLGGMDV	WGQGTTVTVSS
2.16	140	"	QVQLVESGGGLVKPGGSLRLS CAAS	GFTFSDYYMS	WIRQAPGKGLE WVS	YISRSGSTIYY ADSVKG	RFTISRDNAKNSLYLQMNSLR AEDTAVYYCAR	SLGGMDV	WGQGTTVTVSS
2.18	148	"	QVQLVESGGGLVKPGGSLRLS CAAS	GFTFSDYYMS	WIRQAPGKGLE WVS	YISRSGSTIYY ADSVKG	RFTISRDNAKNSLYLQMNSLR AEDTAVYYCAR	SLGGMDV	WGQGTTVTVSS
	289	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
4.12	218	VH3-33/D4-17/JH6b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ETTVTKEGYYY YGMDV	WGQGTTVTVSS
4.9	206	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ETTVTKEGYYY YGMDV	WGQGTTVTVSS
	290	Germline	QVQLVQSGAEVKKPGASVKVS CKAS	GYTFTSYGIS	WVRQAPGQGLE WMG	WISAYNGNTNY AQKLQG	RVTMTTDTSTSTAYMELRSLR SDDTAVYYCAR		WGQGTLVTVSS
2.6	108	VH1-18/D1-7/JH4b	QVQLVQSGAEVKKPGASVKVS CKAS	GYTFTSYGIS	WVRQAPGQGLE WMG	WISAYNVNTNY AQKLQG	RVTMTTDTSTNTAYMELRSLR SDDTAVYYCAR	DPITETMEDYF DY	WGQGTLVTVSS
	291	Germline	EVQLVQSGAEVKKPGESLKIS CKGS	GYSFTSYWIG	WVRQMPGKGLE WMG	IIYPGDSDTRY SPSFQG	QVTISADKSISTAYLQWSSLK ASDTAMYYCAR		WGQGTLVTVSS
3.2	166	VH5-51/D7-27/JH4b	EVQLVQSGAEVKKPGESLKIS CKTS	GYSFTSYWIG	WVRQMPGKGLE WMG	IIYLGDSDTRY SPSFQG	QVTISADKSISTAYLQWSSLK ASDTAMYYCAR	SNWGLDY	WGQGTLVTVSS
	292	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
4.16	234	VH3-33/D2-21/JH6b	QVQLVESGGGVVQPGRSLRLS CTTS	GFTFSNYGMH	WVRQAPGKGLE WVA	VIWYDGSIKYY VDSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	EKDCGGDCYSH YGMDV	WGQGTTVTVSS
4.15	230	"	QVQLVESGGGVVQPGRSLRLS CTTS	GFTFSNYGMH	WVRQAPGKGLE WVA	VIWYDGSIKYY VDSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	EKDCGGDCYSH YGMDV	WGQGTTVTVSS
4.14	226	"	QVQLVESGGGVVQPGRSLRLS CTTS	GFTFSNYGMH	WVRQAPGKGLE WVA	VIWYDGSIKYY VDSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	EKDCGGDCYSH YGMDV	WGQGTTVTVSS
4.17	238	"	QVQLVESGGGVVQPGRSLRLS CTTS	GFTFSNYGMH	WVRQAPGKGLE WVA	VIWYDGSIKYY VDSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	EKDCGGDCYSH YGMDV	WGQGTTVTVSS
	293	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
2.1	88	VH3-33/--/JH6b	QVQLVESGGDVVQPGRSLRLS CAAS	GFTFSSSGMH	WVRQAPGKGLE WVA	IIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	DDYYYGMDV	WGQGTTVTVSS
	294	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTLVTVSS
2.2	92	VH3-33/D4-23/JH4a	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGNNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ESDYGGNPYFD Y	WGQGTTVTVSS
	295	Germline	QVQLQESGPGLVKPSETLSLT CTVS	GGSISSYYWS	WIRQPPGKGLE WIG	YIYYSGSTNYN PSLKS	RVTISVDTSKNQFSLKLSSVT AADTAVYYCAR		WGQGTLVTVSS
3.6	178	VH4-59/D6-19/JH4b	QVQLQESGPGLVKPSETLSLT CTVS	GGSISSYYWS	WIRQPPGKGLE WIG	YFYYSGSTNYN PSLKS	RVTISVDTSKNQFSLKLRSVT AADTAVYYCAR	DRPTSGWFDY	WGQGTLVTVSS
	296	Germline	EVQLVESGGGLVQPGGSLRLS CAAS	GFTFSSYSMN	WVRQAPGKGLE WVS	YISSSSSTIYY ADSVKG	RFTISRDNAKNSLYLQMNSLR DEDTAVYYCAR		WGQGTLVTVSS
4.22	258	VH3-48/D1-14/JH4b	EVQLVESGGGLVQPGGSLRLS CAAS	GFTFSNYGMN	WVRQAPGKGLE WVS	YISNSTTSKYY ADSVKG	RFTISRDNAKNSLYLQMNSLR DVDTAVYHCAR	GPGGFDY	WGQGTLVTVSS
	297	Germline	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGSTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTLVTVSS
2.9	120	VH3-53/--/JH4b	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGGTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	GPGSFDY	WGQGTLVTVSS
	298	Germline	QVQLVQSGAEVKKPGASVKVS CKAS	GYTFTGYYMH	WVRQAPGQGLE WMG	WINPNSGGTNY AQKFQG	RVTMTRDTSISTAYMELSRLR SDDTAVYYCAR		WGQGTTVTVSS
3.1	162	VH1-2/D6-19/JH6b	QVQLVQSGAEVKKPGASVKVS CKAS	GYTFTGYYMH	WVRQAPGQGLE WMG	WINPNSGGTNY AQKFQG	RVTMTRDTSISTAYMELSRLR SDDTAVYYCAR	APLWTVRSWYY YGMDV	WGQGTTVTVSS
	299	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
4.19	246	VH3-33/D3-9/JH6b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGRNKYN ADSVKG	RFTISRDNSKNTLNLQMNSLR AEDTAVYYCAR	DLTYYDILGGM DV	WGQGTTVTVSS
4.18	242	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGRNKYN ADSVKG	RFTISRDNSKNTLNLQMNSLR AEDTAVYYCAR	DLTYYDILGGM DV	WGQGTTVTVSS
2.8	116	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGRNKYN ADSVKG	RFTISRDNSKNTLNLQMNSLR AEDTAVYYCAR	DLTYYDILGGM DV	WGQGTTVTVSS

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
4.20	250	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGRNKYN ADSVKG	RFTISRDNSKNTLNLQMNSLR AEDTAVYYCAR	DLTYYDILGGM DV	WGQGTTVTVSS
2.7	112	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGRNKYN ADSVKG	RFTISRDNSKNTLNLQMNSLR AEDTAVYYCAR	DLTYYDILGGM DV	WGQGTTVTVSS
	300	Germline	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGSTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
2.19	152	VH3-53/--/JH6b	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGSTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	GEGGMDV	WGQGTTVTVSS
2.15	136	"	EVQLVESGGGLIQPGGSLRLS CAAS	GFTVSSNYMS	WVRQAPGKGLE WVS	VIYSGGSTYYA DSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	GEGGMDV	WGQGTTVTVSS
	301	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
2.5	104	VH3-33/D3-10/JH6b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYDMH	WVRQAPGKGLE WVA	VIWYDGSNKYH ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ENTMVRGGDYY YGMDV	WGQGTTVTVSS
3.5	174	"	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYDMH	WVRQAPGKGLE WVA	VIWYDGSNKYH ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	ENTMVRGGDYY YGMDV	WGQGTTVTVSS
	302	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTLVTVSS
4.10	210	VH3-33/D4-17/JH5b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	SRYGDWGWFDP	WGQGTLVTVSS
	303	Germline	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR		WGQGTTVTVSS
4.21	254	VH3-33/D6-19-D7-27/JH6b	QVQLVESGGGVVQPGRSLRLS CAAS	GFTFSSYGMH	WVRQAPGKGLE WVA	VIWYDGSNKYY ADSVKG	RFTISRDNSKNTLYLQMNSLR AEDTAVYYCAR	GNRVVVAGTRV TPANWGYYYYG MDV	WGQGTTVTVSS

Table 34. Hybridoma Light Chain Analysis AB-TNFα-XG2K

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
	304	Germline	QSVLTQPPSVSGAPGQRVTIS C	TGSSSNIGAGY DVH	WYQQLPGTAPK LLIY	GNSNRPS	GVPDRFSGSKSGTSASLAITG LQAEDEADYYC	QSYDSSLSGSV	FGGGTKLTVL
2.4	102	V1-13/JL2	QSLLTQPPSVSGAPGQRVTIS C	TGSSSNIGAGY DVH	WYQQFPGTAPK LLIY	GNSNRPS	GVPDRFSGSKSGTSASLAITG LQAEDEADYYC	QSYDSSLSGSV	FGGGTKLTVL
4.7	200	"	QSVLTQPPSVSGAPGLRVTIS C	TGNSSNIGAGY DVH	WYQQLPGTAPK LLIY	GNSNRPS	GVPDRFSGSKSGTSASLAITG LQAEDEDTDYYC	QSYDSSLSGSV	FGGGTKLTVL
	305	Germline	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
4.9	208	A30/JK4	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
4.21	256	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK CLIY	VASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
4.20	252	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRHDLG	WYQQKPGKAPE RLIY	GASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
4.17	240	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHMSLPLT	FGGGTKVEIK
4.16	236	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHMSLPLT	FGGGTKVEIK
2.14	134	"	DIQMTQSPSSLSASVGDRVTI TC	RASQAIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSRSGTEFTLTISS LQPEDFASYYC	LQHRSYPLT	FGGGTKVEIK
4.15	232	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHMSLPLT	FGGGTKVEIK
3.9	188	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WFQQKPGKAPK RLIY	AASNFLS	GVPSRFSGSGSGTEFTLTISS LQPEDFTTYYC	LQHNFYPPRLT	FGGGTKVEIK
4.14	228	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHMSLPLT	FGGGTKVEIK
4.13	224	"	DIQMTQSPSSLSTSVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
4.12	220	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
2.10	126	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTVSS LQPEDFATYYC	LQHNSLPLT	FGGGTKVEIK
3.6	180	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPRKAPK RLIF	AASSLQS	GVPSRFSGSGSGPEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK
3.5	176	"	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPRKAPK RLIF	AASSLQS	GVPSRFSGSGSGPEFTLTISS LQPEDFATYYC	LQHNSYPLT	FGGGTKVEIK

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
	306	**Germline**	DIQMTQSPSSLSASVGDRVTI TC	RASQGISNYLA	WYQQKPGKVPK LLIY	AASTLQS	GVPSRFSGSGSGTDFTLTISS LQPEDVATYYC	QKYNSAPFT	FGPGTKVDIK
4.23	264	A20/JK3	DIQMTQSPSSLSASVGDRVTI TC	RASQGISNYLA	WYQQKPGKVPK FLIY	AASTLQS	GVPSRFSGSGSGTDFTLTVSS LQPEDVATYYC	QMYNSVPFT	FGPGTKVDIK
	307	**Germline**	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK RLIY	AASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPWT	FGQGTKVEIK
4.22	260	A30/JK1	DIQMTQSPSSLSASVGDRVTI TC	RASQGIRNDLG	WYQQKPGKAPK CLIY	VASSLQS	GVPSRFSGSGSGTEFTLTISS LQPEDFATYYC	LQHNSYPWT	FGQGTKVEIK
	308	**Germline**	DIQMTQSPSSLSASVGDRVTI TC	RASQSISSYLN	WYQQKPGKAPK LLIY	AASSLQS	GVPSRFSGSGSGTDFTLTISS LQPEDFATYYC	QQSYSTPIT	FGQGTRLEIK
2.16	142	O12/JK5	DIQMTQSPSSLSASVGDRVAI TC	RTSQSISSYLN	WYQQKPGKAPE LLIY	AASNLQS	GVPSRFSGSGSGTDFTLTISS LQPEDFATYYC	QQSSSTLIT	FGQGTRLEIK
2.19	156	"	DIQMTQSPSSLSASVGDRVTI TC	RTSQSISSYLN	WYQQKPGKAPE VLIY	AASNLQR	GVPSRFSGSGSGTDFTLTISS LQPEDFATYYC	QQSSSTLIT	FGQGTRLEIK
2.18	150	"	DIQMTQSPSSLSASVGDRVTI TC	RTSQSISSYLN	WYHQKPGKAPE LLIY	AAFNLQS	GVPSRFSGSGSGTDFTLTISS LQPEDFATYYC	QQSSSTLIT	FGQGTRLEIK
2.21	160	"	DIQMTQSPSSLSASVGDRVTI TC	RTSQSISSYLN	WYQQKPGKAPE LLIY	AAFNLQS	GVPSRISGSGSGTDFTLTISS LHPEDFATYYC	QQSSSTLIT	FGQGTRLEIK
	309	**Germline**	QSVLTQPPSVSAAPQQKVTIS C	SGSSSNIGNNY VS	WYQQLPGTAPK LLIY	DNNKRPS	GIPDRFSGSKSGTSATLGITG LQTGDEADYYC	GTWDSSLSAGV	FGGGTKLTVL
3.1	164	V1-19/JL3	QSVLTQPPSMSAAPQQKVTIS C	SGSSSNIGNNY VS	WYQQLPGTAPK LLIY	DNNKRPS	GIPDRFSGSKSGTSATLGITG LQTGDEADYYC	GTWDSSLSAGV	FGGGTKLTVL
1.1	86	"	QSVLTQPPSVSAAPQQKVTIS C	SGSSSNIGNNY VS	WYQQFPGTAPK LLIY	DNNSRPS	GIPDRFSGSKSGTSATLGITG LQTGDEADYYC	GTWDSSLSAGV	FGGGTKLTVL
	310	**Germline**	EIVMTQSPATLSVSPGERATL SC	RASQSVSSNLA	WYQQKPGQAPR LLIY	GASTRAT	GIPARFSGSGSGTEFTLTISS LQSEDFAVYYC	QQYNNWPIT	FGQGTRLEIK
3.8	184	L2/JK5	EIVMTQSPATLSVSPGERVTL SC	RASQSATSNLA	WYQQKPGQAPR LLIY	GASTRAT	GIPARFSGSGSGTEFTLTISS LQSEDFAVYYC	QQYNNWPPT	FGQGTRLEIK
	311	**Germline**	QSVLTQPPSVSAAPQQKVTIS C	SGSSSNIGNNY VS	WYQQLPGTAPK LLIY	DNNKRPS	GIPDRFSGSKSGTSATLGITG LQTGDEADYYC	GTWDSSLSAGV	FGGGTKLTVL
2.1	90	V1-19/JL2	QSALTQPPSVSAAPQQKVTIS C	SGSSSNIGSNY VS	WCQQLPRTAPK LLIY	DNNKRPS	GIPDRFSGSKSGTSATLVITG LQTGDEADYYC	GAWDSSLSAGV	FGGGTKLTVL
	312	**Germline**	DIQMTQSPSSVSASVGDRVTI TC	RASQGISSWLA	WYQQKPGKAPK LLIY	AASSLQS	GVPSRFSGSGSGTDFTLTISS LQPEDFATYYC	QQANSFPWT	FGQGTKVEIK
2.9	122	L5/JK1	DIQMTQSPSSVSASVGDRVTI TC	RASQGISSWLA	WYQQKPGKAPK LLIY	AASSLQS	GVPSRFSGSGSGTDFTLTISS LQPEDFASYYC	QQANSFPWT	FGQGTKVEIK

Table 34, 2

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
	313	**Germline**	EIVMTQSPATLSVSPGERATL SC	RASQSVSSNLA	WYQQKPGQAPR LLIY	GASTRAT	GIPARFSGSGSGTEFTLTISS LQSEDFAVYYC	QQYNNWPLT	FGGGTKVEIK
4.11	216	L2/JK4	EIVMTQSPATLSVSPGERATL SC	RASQSVISNLA	WYQQQPGQAPR LLIY	GASTRAT	GFPARFSGSGSGTEFTLTISS LQSEDFAVYYC	QQYNNWPLT	FGGGTKVEIK
2.17	146	"	EIVMTQSPATLSVSPGERATL SC	RASQSVSSNLA	WYQQKPGQAPR LLIY	GASTRAT	GIPARFSGSRTGTEFTLTISS LQSEDFAVYYC	QQYNNWPLT	FGGGTKVEIK
	314	**Germline**	EIVMTQSPATLSVSPGERATL SC	RASQSVSSNLA	WYQQKPGQAPR LLIY	GASTRAT	GIPARFSGSGSGTEFTLTISS LQSEDFAVYYC	QQYNNWPFT	FGPGTKVDIK
4.18	244	L2/JK3	EIVMTQSPATLSVSPGERATL SC	RASQSVTSNLA	WYQQKPGQAPR LLIY	GASTRAT	GIPARFSGSGSGTEFTLTISS LPSEDFAVYYC	QQYHTWPFT	FGPGTKVDIK
2.15	138	"	EIVMTQSPSTLSVSPGERATL SC	RASQSVSSNLA	WYQQKPGQAPR LLIY	GASIRAT	GIPARFSGSGSGTEYTLTISS LQSEDFAVYYC	QQYNNWPFT	FGPGTKVDIK
4.19	248	"	EIVMTQSPSTLSVSPGERATL SC	RASQSVTSNLA	WYQQKPGQAPR LLIY	GASTRAT	GIPARFSGSGSGTEFTLTISS LPSEDFAVYYC	QQYHTWPFT	FGPGTKVDIK
	315	**Germline**	QSVLTQPPSASGTPGQRVTIS C	SGSSSNIGSNT VN	WYQQLPGTAPK LLIY	SNNQRPS	GVPDRFSGSKSGTSASLAISG LQSEDEADYYC	AAWDDSLNGPV	FGGGTKLTVL
4.10	212	V1-16/JL3	QSVLTQPPSASGTPGQRVTIS C	SGSSSNIGSNT VN	WYQQLPGTAPK LLIY	SNNQRPS	GVPDRFSGSKSGTSASLAISG LQSEDEADYYC	AAWDDSLNGPV	FGGGTKLTVL
	316	**Germline**	SSELTQDPAVSVALGQTVRIT C	QGDSLRSYYAS	WYQQKPGQAPV LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	NSRDSSGNHLV	FGGGTKLTVL
2.5	106	V2-13/JL3	SSELTQDPAVSVALGQTVRIT C	QGDSLRRYYAS	WYQQKPGQAPI LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	NSRDSSGNHLV	FGGGTKLTVL
3.4	172	"	SSELTQDPAVSVALGQTVRIT C	QGDSLRRYYAS	WYQQKPGQAPI LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	NSRDSSGNHLV	FGGGTKLTVL
	317	**Germline**	SYELTQPPSVSVSPGQTARIT C	SGDALPKKYAY	WYQQKSGQAPV LVIY	EDSKRPS	GIPERFSGSSSGTMATLTISG AQVEDEADYYC	YSTDSSGNHVV	FGGGTKLTVL
2.19	154	V2-7/JL2	SYELTQPPSVSVSPGQTARIT C	SGDALPKKYVY	WYQQKSGQAPV LVIY	EDSKRPS	GIPERFSGSSSGTMATLTING AQVEDEADYYC	YSTDSSGNHVV	FGGGTKLTVL
	318	**Germline**	DIQMTQSPSSLSASVGDRVTI TC	QASQDISNYLN	WYQQKPGKAPK LLIY	DASNLET	GVPSRFSGSGSGTDFTFTISS LQPEDIATYYC	QQYDNLPIT	FGQGTRLEIK
2.13	130	018/JK5	DIQMTQSPSSLSASVGDRVTI TC	QASQDISNYLN	WYQQKPGKAPK LLIY	DASNLET	GVPSRFSGSGSGTDFTFTISS LQPEDIATYYC	HQCDNLPH	FGQGTRLEIK
	319	**Germline**	SSELTQDPAVSVALGQTVRIT C	QGDSLRSYYAS	WYQQKPGQAPV LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	NSRDSSGNHVV	FGGGTKLTVL
2.3	98	V2-13/JL2	SSELTQDPAVSVALGQTVRIT C	QGDSLRIYYAS	WYQQKPGQAPV LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTVTG AQAEDEADYYC	KSRDSSFNHVT	FGGGTKLTVL
2.6	110	"	SSELTQDPAVSVALGQTVRIT C	QGDSLRNYYAS	WYQQKPGQAPI LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	NSRDSSGNHVT	FGGGTKLTVL
4.3	192	"	SSELTQDPAVSVALGQTVRIT C	QGDSLRSYYAS	WYQQKPGQAPV LVIY	GKNNRPS	GIPDRFSGSSSENTASLTITG AQAEDEADYYC	KSRDSSFNHVT	FGGGTKLTVL

CHAIN NAME	SEQ ID NO:		FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
4.8	204	"	SSELTQDPAVSVALGQTVRIT C	QGDILRSYYAS	WYQQKPGQAPI LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	KSRDSSYNHVT	FGGGTKLTVL
2.8	118	"	SSELTQDPAVSVALGQTVRIT C	QGDSLRRYYAS	WYQQKPGQAPI VVIY	GKKNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	KSRDSSGNHVT	FGGGTKLTVL
2.2	94	"	SSELTQDPAVSVALGQTVRIT C	QGDSLRSYYAS	WYQQRPGQAPV LVIY	GRNNRPS	GIPDRFSGSSSGLTASLTVTG AQAEDEADYYC	NSRDSSYNHVA	FGGGTKLTVL
4.4	196	"	SSELTQDPAVSVALGQTVRIT C	QGDILRSYYAS	WYQQKPGQAPV LVIY	GKNNRPS	GIPDRFSGSSSGNTASLTITG AQAEDEADYYC	KSRDSSYNHVT	FGGGTKLTVL
	320	Germline	QSVLTQPPSVSGAPGQRVTIS C	TGSSSNIGAGY DVH	WYQQLPGTAPK LLIY	GNSNRPS	GVPDRFSGSKSGTSASLAITG LQAEDEADYYC	QSYDSSLSGSV	FGGGTKLTVL
3.2	168	V1-13/JL3	QSVLTQPPSVSGAPGQRVTIS C	TGSSSNIGAGY DVH	WYQQFPGTAPK LLIQ	GNSNRPS	GVPDRFSGSKSGTSASLAITG LQAEDEADYYC	QSYDSSLSGSV	FGGGTKLTVL
2.7	114	"	QSVLTQSPSVSGAPGQRVTIS C	TGSSSNIGAGY DVH	WYQQLPGTAPR LLIY	GNNNRPS	GVPDRFSGSKSGTSASLAITG LQAEDEADYYC	QSYDSSLSGSV	FGGGTKLTVL